

**Abstract****MATRIX ARRAY DEVICES WITH FLEXIBLE SUBSTRATES**

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A matrix array device, for example, an active matrix display device, image sensor, or the like, comprises a matrix circuit (12, 14, 16, 18) carried on a flexible substrate (20) which circuit includes an array of semiconductor devices (12), such as TFTs, occupying discrete areas. Selected regions of the substrate (20) away from the semiconductor devices (12) are formed as areas of weakness to encourage flexing of the substrate to occur preferentially at those regions upon bending of the device and so reduce the risk of damage to the semiconductor devices. The regions, for example, may comprise lines of weakness (50, 52) extending between the semiconductor devices and may be formed by localised thinning of the substrate or by treating the substrate material to modify its stiffness at predetermined areas.

Figure 3